

THE
BOSTON MEDICAL AND SURGICAL
JOURNAL.

VOL. VIII.]

WEDNESDAY, APRIL 10, 1833.

[NO. 9.]

ACTÆA RACEMOSA.

BY WILLIAM TULLY, M.D., PROFESSOR OF MATERIA MEDICA, ETC. IN THE MEDICAL
INSTITUTION OF YALE COLLEGE.

[Communicated for the Boston Medical and Surgical Journal.]

THERE is a group of at least nine (and possibly eleven) very nearly allied species of plants, which were distributed by Linnæus into two genera, called by him *Actæa* and *Cimicifuga*. One, however, and perhaps two, of these species, possesses characters common to both of these genera, with peculiarities in the parts of fructification that belong to no other species of either genus. Upon the supposition that *Actæa* and *Cimicifuga* are properly distinct genera, the particular species just mentioned have equal claims to be considered distinct, and have accordingly been separated by Mr. Rafinesque, with the generic name *Macrotrys* or *Botrophis*. Provided *Actæa* and *Cimicifuga* are still kept distinct, I have no doubt that *Macrotrys* or *Botrophis* ought to be so likewise. Upon the same principles, it is probable that *Cimicifuga palmata*, which differs so prominently from all the rest of this whole group, in habit, foliage, and the number of its styles, would likewise require to be separated. But some of the latest and most distinguished botanists have united (and, as I think, judiciously) the whole group into one genus, under the name *Actæa*—an arrangement, which, in my opinion, ought by all means to be adopted. Under such a view of this group of plants, there are at least six (and possibly eight) species of *Actæa* in North America, three of which are common in New England, viz. *Actæa racemosa*, *Actæa rubra*, and *Actæa pachypoda*. *Actæa spicata*, of which some of the American species were once incorrectly considered as varieties, is now well known not to be a native of this country. Each of the three New England species, above named, is believed to possess valuable medicinal powers; yet *Actæa rubra*, and *pachypoda*, are believed to be so much inferior in remedial efficacy to *Actæa racemosa*, as hardly to be worthy of being retained in the materia medica, in comparison with the last.

But though, in the present state of our knowledge, in regard to *Cimicifuga*, *Macrotrys* or *Botrophis*, and *Christophoriana* or *Actæa* proper, I entertain no doubt that they should constitute but one genus (subdivided as above), yet, should several other species belonging to each group be hereafter discovered, and should such species diverge very considerably in character from each other, why then, indeed, it may be expedient to subdivide, into three distinct genera, as has been already proposed. The following is a synopsis of the genus *Actæa*, as it now is.

I. *Sub-genus Cimicifuga.*

1. *Actæa Cimicifuga.* Lin. Hab. Siberia and North-west America.
2. *Actæa simplex.* De Cand. Hab. Kamtschatka.
3. *Actæa podocarpa.* De Cand. Hab. Carolina.
4. *Actæa cordifolia.* De Cand. Hab. Carolina.
5. *Actæa palmata.* De Cand. Hab. Carolina.

II. *Sub-genus Macrotrys or Botrophis.*

6. *Actæa racemosa.* Lin. Hab. From Canada to Florida.
7. *Actæa Japonica.* Thumb. Hab. Japan.

III. *Sub-genus Christophoriana or Actæa.*

8. *Actæa spicata.* Lin. Hab. Europe.
9. *Actæa rubra.* Big. Hab. From Canada to Florida.
10. *Actæa pachypoda.* Elliott. Hab. From Canada to Carolina.
- 11? *Actæa cœrulea.* De Cand. Hab. Florida. Probably identical with *Actæa rubra.*
- 12? *Actæa microcarpa.* De Cand. Hab. About Boston. Probably identical with *Actæa pachypoda.*

Thomas Green, in his *Universal Herbal*, published in London in 1834, mentions another species, which he calls *Actæa aspera*, or Rough-leaved herb-Christopher, of which he says, 'Stem climbing; leaves lanceolate, rough; spikes interrupted.' He says, 'This species is a native of Canton, near China' (which I suppose should be transposed, so as to read China, near Canton); 'and its leaves being extremely rough, the Chinese use them for polishing, particularly tin-ware.' Whatever this plant may be, I think, at all events, it is not an *Actæa*.

Actæa racemosa, of Linnaeus, has been described by various writers, under all of the following names, viz.—*Actæa racemosa.* Linnaeus.—*Actæa monogyna.* Walter.—*Cimicifuga Serpentina.* Pursh.—*Cimicifuga racemosa.* Nuttall.—*Macrotrys Actæoides.* Rafinesque.—*Macrotrys Serpentina.* Eaton.—*Botrophis Serpentina.* Rafinesque.

The name *Actæa* is derived from the Greek *Ἀκτῆ*, one of the ancient denominations of the *Sambucus*, or Elder, which the genus *Actæa* is supposed to resemble in its foliage. The name *Cimicifuga* is from the Latin *Cimex*, a bug, and *Fuga*, flight, from the supposed power of some species of the genus to drive away bugs. The name *Macrotrys* is a contraction of the Greek *Macros*, large, and *Botrys*, a raceme, in allusion both to the kind of inflorescence and the length and size of the raceme. It is remarkable that no author, who has yet quoted or adopted this name from Mr. Rafinesque, has ever spelt it correctly. Elliott, Eaton, and De Candolle, leave out the *r* from the last syllable, writing it *Macrotrys*. Others have even written it *Megotrys*. I do not know whether it was from this singular fate of the word, that Mr. Rafinesque has finally abandoned it; but it appears to me that this affords sufficient reason. The name *Botrophis* is a contraction of the Greek *Botrys*, a raceme, and *Ophis*, a serpent, on account of an imaginary resemblance between the raceme of this plant and a serpent.

The several popular names which I have known applied to this plant, are *Black Cohosh*, *Black Snake-root*, *Wild Snake-root*, *Squaw-root*,

Rattle-weed, Rattle-top, Rich-weed, Rich-root, Deer-weed, and Cornutus's Canada Herb-Christopher. There is not a single individual of these names that is not as often applied to other plants, as to this, except the first. The name *Black Snake-root*, to which some have given a preference, is certainly applied to as many as four widely different articles, and is thus eminently equivocal. I repeat, then, if any of these names is worthy of being retained in the *materia medica*, it is the first (*Black Cohosh*), since it is the only one which has not, to my certain knowledge, been otherwise applied.

The genus *Actæa* belongs to Jussieu's Natural Order *Ranunculaceæ*, and to De Candolle's Tribe *Pæoniæ*. Linnæus placed it in his Natural Order *Mulsiliquæ*. The habitat of *Actæa racemosa* is from Canada to Florida. By Michaux, it is said to grow '*per tractus montium*;' by Pursh and Dyckman, '*in shady, stony woods*;' by Garden, '*in broken, rocky situations, remarkable for the fertility of the soil*;' by Torrey, '*in rocky woods*;' and by Darlington, '*in rich woodlands*.' Torrey informs us, that in the Northern and Middle States, it is in flower from June to July; Pursh and Dyckman say from July to August; Muhlenberg says that it flowers in Pennsylvania, in July; Darlington says the latter end of June, and that the fruit is ripe about the middle of September; while Elliott designates June and July as its flowering time, in South Carolina and Georgia.

The root of *Actæa racemosa* consists of a tuberous and irregular rhizoma, and numerous slender fibrils. It is perennial, and of a dark color. The stem is herbaceous, pubescent, and from two to nine feet in height. The leaves are decomposite or tritermately divided; the leaflets are ovate-oblong, acutely serrate, dentate or sub-incised, with mucronate and divaricate teeth. The inflorescence consists in very long, pubescent, terminal, and sub-paniculate racemes, which are very much crowded with flowers, and which are nearly white, and fetid. The calyx (which is a perianth) and the corol are small and caducous, and sometimes the latter is deficient. The perianth is tetrasepalous, becoming colored before expansion. When the petals are present, they are thick, gibbous, very small, pediceled, terminated by a setaceous acumination, and more numerous than the sepals. The stamens are longer than the petals. There is usually but one pistil, though occasionally there are two. The stigma is simple, sessile, and curved towards the gibbous side of the ovary. The capsules are ovate, pubescent, dry, bivalve, and dehiscent at their straight suture. The seeds are oblong, and imbricately disposed. According to De Candolle, the herbage of *Actæa racemosa* is like that of *Actæa spicata*, though larger; the florescence is like that of *Actæa Cimicifuga*, except that the flowers are monagynous; the fruit is like that of *Actæa cordifolia*, except that it is unicapsular. The odor of the whole plant is unpleasant, and even offensive.

As the *Leontice Thalictroides* is popularly called *Blue Cohosh*, its root is very frequently collected and sold for that of *Actæa racemosa*. The fibrils of the root of the *Leontice* are, however, considerably smaller, much more numerous, and of a lighter color; their taste is very little, if at all, bitter, and not in any degree vivose, and they are considerably acrid, or pungent, at least after being long chewed. There is

reason to think that the *Leontice* possesses very different medicinal powers, from *Actæa racemosa*.

The root of the *Sanicula Marilandica*, as well as of *Leontice Thalictroides*, is not unfrequently collected and sold for that of *Actæa racemosa*, probably from the circumstance that the *Sanicula*, in common with the *Actæa*, is popularly called *Black Snake-root*; but there is less excuse for this error than for the preceding, since, upon the whole, the *Sanicula* has less resemblance to the *Actæa*, than the *Leontice* has.

But it is a much more common mistake to collect and employ the roots of *Actæa rubra*, and *Actæa pachypoda*, for *Actæa racemosa*. The full grown and old roots of these two species are difficult of distinction from the root of *Actæa racemosa*, unless attached to their top. These are generally supposed to possess similar powers, but in a far weaker degree; and even in their own degree, they are supposed to be very variable and uncertain in their operation. There is good reason to believe that this mistake, and the consequent failure of the expected therapeutic operation, has contributed more to bring the *Actæa racemosa* into disrepute, than any other cause.

Even the genuine root of *Actæa racemosa* is variable in the degree of its medicinal powers, according to the season in which it is collected. It is the most active, and it preserves its powers for a long time the most perfectly, when it is collected in the autumn, immediately after the ripening of the seeds and the decay of the top. If collected in the spring, it is variable in its activity, and when long kept, retains its powers less perfectly; but if collected in the flowering season, it is extremely uncertain as respects its activity, and it sometimes loses a great portion of its virtues, by drying and age. Collectors, even when engaged to obtain it in the autumn, often deceive their employers, and obtain it in the flowering season; and many druggists are not sufficiently acquainted with this subject, to direct the proper time. Hence a frequent disappointment, from this source, in its operation.*

The root, seeds, and flowers, of *Actæa racemosa*, have all been employed in medicine, but principally the first. When chewed, the root seems, at first, to have scarcely any taste, except a very slight sweetness. After some little time, however, a peculiar sub-aromatic bitterness, mingled with rather a vivose flavor, is pretty strongly developed. This remains in the mouth a considerable time; but when its intensity begins to subside, the sweetness and the aromatic flavor are more manifest than at first. In the tincture, the sweetness and the aromatic flavor are prominent from the beginning.

I know of nothing which deserves the name of an analysis of this root. Dr. G. W. Mears, who graduated in medicine, at the Jefferson College, in Philadelphia, in 1827, and made this article the subject of an inaugural dissertation, from some experiments which he made with it, concluded that it contains *tannin, extractive matter, bitter matter, gallic acid, resinous matter, gummy matter, starch, and lignine*. Dr. Mears

* It is a prevailing opinion that the roots of the persistent plants are as good for medicinal purposes, when collected in the spring, as in the autumn. This is at variance with all my observations and experience. I scarcely know an exception to the rule, that those collected in the spring are always inferior to those collected in the autumn—inferior and variable in power, and more likely to lose their virtues by drying and age.

thinks that he obtained 'sufficient evidence' of its containing an 'alkaline principle,' 'to encourage a future investigation of this interesting subject;' but he leaves us perfectly in the dark respecting the nature of this evidence. Long previous to the publication of Dr. Mears's Essay, I also had made experiments on this root, and had likewise obtained sufficient evidence of its containing an alkaline principle; but on careful examination, this alkali proved to be Calcia, or Lime. I also found a small quantity of tannin; a principle or principles soluble in alcohol, but not in water; a principle or principles soluble in water, but not in alcohol; and something soluble in both: but I did not succeed in ascertaining the precise nature of these products. If it will throw any light upon the matter, to christen these respectively, *resin*, *gum*, and *extractive*, I shall be perfectly willing to accommodate all who entertain such an opinion. My experiments did not detect any peculiar *bitter principle* distinct from the foregoing; and I did not search particularly, either for *starch* or *gallic acid*. I consider it certain that neither Dr. Mears nor myself succeeded in obtaining the active principle of this root, and therefore the field is fairly open for the researches of some more skillful and fortunate chemist; and I hope that such an one will, ere long, undertake the investigation.

In relation, however, to the medicinal powers of *Actæa racemosa*, I hope to be able to say something more definite and more satisfactory, than in relation to its analysis; since, with me, it has been a subject of more or less observation and investigation, ever since the year 1810; and, I can add, that scarcely a year has passed, since that period, without contributing something to my stock of information respecting it.

The first operative effect of *Actæa racemosa*, which I shall mention, is that it is decidedly and prominently *narcotic*. That this article possessed more or less narcotic powers, was one of the traditional notions with which I commenced practice; and I had determined this fact, by repeated observation, long before there were any published accounts to this effect: but from the imperfection of the pharmaceutic preparations of which I first made use, I was ignorant of the degree of its power in this respect, for a number of years. I believe that the first published account of any operative effect, that would seem to imply a narcotic power in this article, is contained in the '*Materia Medica Americana potissimum Regni Vegetabilis*' of Dr. Schœpf, of Erlangen, in Germany, published in 1787, where it is said to be anodyne; and the next is in Hand's '*House Surgeon and Physician*' (published in New Haven, Ct. in 1820), in which it is stated to possess the power of producing sleep. The next, and much more explicit statement on this point, is contained in a paper by Dr. T. S. Garden (published in the *American Medical Recorder*, Vol VI. pages 609—613, Philadelphia, 1823), in which it is said that *Actæa racemosa* 'disorders the sensorium like *digitalis*,' and that 'in a full dose it prostrates, in a distressing degree, producing nausea, vertigo, anxiety, dilatation of the pupils, quick and small pulse, &c. In Dr. Ansel W. Ives's 2nd American edition of *Paris's Pharmacology* (published in New York in 1824), is a summary of Dr. Garden's paper, given, in a note, from *Lycopus Virginicus*, containing of course the account of its narcotic operation. In the 4th edition of Chapman's *Ele-*

ments of Therapeutics (published in Philadelphia in 1825), there is also a recognition of its narcotic powers. Dr. Mears, in a Dissertation (published in Smith's Philadelphia Monthly Journal of Medicine and Surgery, September, 1827), is still more explicit in relation to the narcotic powers of this article; and Rafinesque recognizes them in his Medical Flora, published in 1828. I have witnessed a great number of times, that when efficiently used, the alcoholic tincture powerfully allays morbid irritability and irritation, and irritative action generally; and that it is often very effectual in abating irritative heat and dryness of the skin, and irritative frequency and hardness, or fulness of the pulse. This evinces its possession of the antirritant part of a narcotic operation. In some, perhaps many instances, it is also not only anodyne, but soporific, which constitute another part of a narcotic operation. I do not think, however, that in general it is worthy of reliance for either of the purposes, at least in comparison with opium. When used with great freedom it produces vertigo, epigastric uneasiness, faintness, a cloud before the sight, dilatation of the pupils, retching and vomiting whenever the head is raised upright, universal uneasiness and jactitation, small and weak pulse, cold extremities, cold sweat, and extreme prostration generally. This evinces its power of producing ultimate narcosis. Dr. Mears, who experimented with this agent, took half a drachm of the pulverized root, which produced no effect in an hour. He then took more than a teaspoonful, of what he calls a saturated tincture, as often as every ten minutes, so that he swallowed about an ounce in two hours. In about an hour from the time he began with the tincture, he had much headache and considerable somnolency. In an hour more, he felt very warm, and was so drowsy that he lay down, and soon fell asleep. He remained in a disturbed sleep for another hour, during which he sweat somewhat. On awaking, he had a most distressing pain in the head, vertigo, flushed face, dilated pupils, and an increase of twelve beats in the frequency of the pulse. He soon felt much uneasiness at the stomach, and retched violently. All these symptoms, except the pain in the head, soon subsided. The headache, however, continued about nine hours, after awaking from the sleep produced by this agent, at which time the frequency of the pulse was a little below the natural standard.

The ultimate narcotic effects of *Actæa racemosa* are usually very transient, and are always capable of being relieved by a suspension of the use of the article, and a sufficiently free employment of alcohol in some shape, wine, or opium with common æther, oil, tincture, or infusion of capsicum, alkaline ammonia, or its sesqui-carbonate, &c. When these effects have passed by, the general powers of the system do not seem to be at all impaired by the operation.

There is reason to believe that *Actæa racemosa* is moderately nervine or exhilarant. Dr. Todd, physician to the Retreat for the Insane, Hartford, Con. informs me, that, in some adults (I believe of peculiar susceptibility, and possibly of a peculiar temperament in other respects), he has seen a decided and considerable exhilaration produced by the use of this article. I cannot say, however, that any of my patients have ever mentioned their experiencing from it, in any obvious degree, the calm, placid, and pleasurable sensation, which is one grade of this operation;

nor the peculiar preternatural wakefulness, which is another grade of it: but I think that (in children more especially) I have repeatedly seen a kind of exhilaration, in some cases amounting to a sub-delirium, which (possibly) may be considered as constituting another grade of a nervous or exhilarant effect. Such an operation is generally much more obvious in children than in adults—in part, probably, on account of their greater susceptibility, and in part because they do not restrain the manifestations of it, like adults. But, according to my observations, the exhilaration and the sub-delirium, which this article produces, constitute a state very similar to that peculiar cerebral irritation, which occasionally results from the use of *Conium maculatum*, *Digitalis purpurea* (and perhaps, in a greater or less degree, from every other narcotic, whether it is nervous or exhilarant, or not), when they are managed in a particular manner—an irritation which seems to be analogous to the very incipient stage of delirium tremens, delirium puerperarum, &c., i. e. after the morbid wakefulness has begun, but before there can fairly be said to be delirium. This condition I have commonly been in the habit of considering as a proper erethism of the brain, or, in other words, as a morbid degree of activity and energy in the performance of its proper functions; and I believe it may be produced by any narcotic whatever, under a certain mode of management.

In connection with this last operation, it will be proper to mention an effect of *Actæa racemosa*, first specified by Dr. Garden (in the paper heretofore quoted), viz. that 'in a full dose' it sometimes produces 'pains in the extremities.' For a considerable time, I must confess that I entertained doubts whether the pains referred to, by Dr. Garden, were in fact produced by this agent or were parts of the disease, not then having had occasion to use it as a remedy to such an extent as to cause them to be manifested; but it is now long since I have been in the habit of witnessing them, and since I have repeatedly received the amplest testimony as respects the frequent occurrence of such a symptom, from professional friends, upon whom I can rely implicitly. It is only when taken in large doses, and the patient is suddenly and strongly under its influence, that these pains occur. This appears to me to be a remarkable effect; but, when given to a certain extent, this article certainly operates in this way. These pains seem to be of a neuralgic character, and though severe, yet they are generally transient and fugitive. They take place in various parts of the body; as, for example, when a patient is under the influence of the smallest quantity that will produce this effect at all, the pain is usually referred to the sciatic nerve. Larger quantities will produce pain in the whole lower extremities; and larger still, will occasion darting pains in the head, more especially immediately over the eyes, but often throughout the whole system. These pains, I repeat, appear to be of a perfectly neuralgic character. In the case of Mr. D. R. (of Albany, N. Y.), while laboring under an exacerbation of a long-protracted mercurial sub-acute rheumatism, a saturated alcoholic tincture of this article, in doses of half or two thirds of a fluidrachm, repeated every two or three hours, had the effect of producing very sharp or lancinating pains in the head and back, but more particularly in the lower extremities. The sciatic nerves and the calves of the legs were the

parts in which it was the most urgent. In this case, it was accompanied with from four to eight grains of opium, in the twenty-four hours. In the case of Mrs. V. W. (of Albany, N. Y.), which was rheumatism in the loins and hips, much aggravated by a fall, which probably injured the sciatic nerve, and rendered her incapable of walking, half a fluidrachm of the saturated alcoholic tincture of this article, repeated every three hours, occasioned lancinating pains in both of the lower extremities, and particularly along the sciatic nerves. In this case, from two to four grains of opium were taken in the course of the twenty-four hours. In the case of Mrs. M. P. (likewise of Albany, N. Y.), a lady between sixty and seventy years of age, long subject to sub-acute rheumatic affections, and for many years to such an extent as to produce permanently-enlarged and very nearly paralytic joints, the saturated alcoholic tincture of this article was prescribed, and taken in doses of half a fluidrachm, five times in the twenty-four hours. Every individual dose was followed by lancinating neuralgic pains in the lower extremities, which continued very nearly to the time of the next dose. If a dose was omitted, the pains did not occur. Taking food into the stomach, at any time between the doses, would generally suspend the pains entirely till another dose was administered. When this patient first entered upon the use of this article, the head, as well as the extremities, was affected with the same sort of pain; but, after it had been employed a few days, this effect entirely ceased. This patient was commonly extremely susceptible to the impression of medicines in general; and, in her case, no opium was employed.

I pause here to remark, that since the occurrence of this case, I have uniformly found that the regular use of a little food, as, for example, half a gill or a gill of milk porridge, or the same quantity of a decoction of rice or barley, of about the same consistence, along with each dose of *Actæa racemosa*, has in general effectually prevented such neuralgic pains as sometimes result, in peculiarly susceptible subjects, from merely medicinal doses of this article—such doses as seem to be positively necessary for the cure or relief of the disease, for which the remedy is taken. Liquid food, taken in conjunction with various other articles, is frequently capable of obviating certain unpleasant effects, which they occasionally produce, without interfering in the least with their medicinal agency.

Garret Keaton Lawrence, an intelligent practitioner of medicine of the society of Shakers, in New Lebanon, N. Y., informed me, that for rheumatism of the lower extremities of a patient who labored under *Hydrops Ovarii*, he once prescribed a proof-spirit tincture of the flowers of *Actæa racemosa*, which was made in the proportions of at least four Troy ounces of the flowers to a pint of the menstruum. The dose which he directed was a large teaspoonful, twice in the twenty-four hours. The patient finding considerable benefit from the remedy, but not complete relief, thought a larger quantity might be more serviceable, and accordingly took it in doses of a tablespoonful, instead of a teaspoonful. Immediately after the second dose, she was seized with a severe lancinating pain in the head, and also in the sciatic nerve, both apparently of a pure neuralgic character; and very soon afterwards, with violent pains in the

region of the uterus. Although these pains were extremely severe and urgent, yet they were perfectly and speedily relieved by the internal use of only forty drops of tincture of opium, conjoined with the external use of fomentations. Mr. Lawrence considers the tincture of the flowers of *Actæa racemosa* as being weaker than that of the root, and as possessing some cathartic powers.

Beside violent neuralgic pains, an excessive dose of the tincture of this article will produce irregular and seemingly convulsive action of the breast, manifested by distressing palpitation, &c. In October, 1831, Mr. C. A. T. while attending the lectures in the Vermont Academy of Medicine, took, for a wandering rheumatologic affection, doses of two or more fluidrachms of a strong and well-prepared alcoholic tincture of this article, made with root of the very best quality. Mr. T. was induced to take this quantity, from the circumstance that he had previously taken quite an inferior preparation, of which he could tolerate nearly if not quite half a fluidounce at a dose, and this, too, without much effect of any sort. Very soon extremely violent neuralgic pain was felt, immediately within the upper part of the sternum, and also wandering neuralgic pains in various other parts of the body. Mr. T. now took an additional dose of the medicine, in the expectation of obtaining relief from it, because it was narcotic. In a short time from this, a most distressing palpitation of the heart took place, under which the number of pulsations was upwards of a hundred and thirty in a minute. Pain in the left axilla and shoulder, and, in a less degree, in the wrist, with numbness of the whole arm, and a severe headache, accompanied this palpitation.

Under the free use of the nervine or exhilarant and stimulant narcotics camphor and opium, conjoined with the acids and irritants ammonia and capsicum, aided by the previous impression of a moderate emetic of sulphate of zinc and ipecacuanha, relief was obtained in Mr. T.'s case in the course of a few hours, though the neuralgic pains continued for a considerable time after the cessation of the palpitation. When the pain disappeared, all the indisposition that remained was mere languor and lassitude, and disinclination for motion or exertion, which was not of long duration. It is to be remarked, that from this statement very little conception will be formed of the violence of the symptoms in this case.

I repeat, that it is only when given in inordinate doses, that these effects are liable to occur. That quantity in the twenty-four hours which would operate kindly, if given in moderate and uniform doses, at regular and short intervals, might harass the patient extremely with neuralgic pains if given in large doses, at long intervals. However, in a case of genuine idiopathic acute rheumatism of a severe character, in however large doses *Actæa racemosa* may have been given, I have never known neuralgic pains occur under its use.

Actæa racemosa possesses genuine ebolic powers, i. e. the powers of a partus accelerator. I believe that the earliest medicinal reputation which this article ever had, in the State of Connecticut, more particularly in the county of New Haven, was that of an ebolic, or partus accelerator. The first published account of its possession of this power, is believed to be in Hand's 'House Surgeon and Physician,' already quoted, where it is said that by the Indians it was supposed to be 'effica-

cious ad partum accelerandum.' The next notice to this effect is in Bigelow's 'Sequel to the Pharmacopœia of the United States,' published in Boston, in 1822, where it is said that 'we are told that the Indians made great use of it'—'as an agent ad partum accelerandum.' Recently, Mr. Rafinesque, in his 'Medical Flora,' published in Philadelphia, in 1828, says, 'it is an article of the materia medica of the Indians, much used by them'—'in facilitating parturition, whence its name, Squaw-root.' This last statement, in regard to its use by the Indians, appears to me to rest only upon the most vague report, and it is, in itself, highly improbable. I have elsewhere made some remarks upon what appears to have been the utmost extent of the materia medica of the American Savages, previous to their intercourse with Europeans. If the opinions which I have advanced upon that subject are correct, it will not be considered as by any means probable that they knew of any medicinal powers at all, in this article, and much less of those under consideration. Drastic evacuants of the alimentary canal, do, in truth, seem to have been the only internal medicines employed by this people, previous to any acquaintance with the civilized world. Besides, it is asserted that the aboriginal females of this country always had easy and speedy parturition; and if this was generally the fact, would they have been likely to search out ecbolics, or partus acceleratores?

I have often been informed, by my professional friends, of cases in which *Actæa racemosa* has been prescribed for a cough, to gravid women, by practitioners not aware of its reputed ecbolic powers, with the effect of producing speedy abortion. The circumstances of the cases have been such, as to leave no room for doubt that this agent was the cause of the abortion, as there was no other cause to which it could be ascribed, and as the process was accomplished exactly in the manner in which it is accomplished by *Sclerotium Clavus* (De Candolle), *Acinula Clavus* (Fries), of whose ecbolic powers there is now no doubt.

Dr. Arza Andrews (of North Haven, Ct.), informed me, in 1830, of a case that came under his observation, in which there were slight symptoms only of an approaching abortion about the fourth month, in which *Actæa racemosa* was given, under the idea that it might prove a substitute for opium, and prevent the apprehended event. It was found, however, to operate speedily and effectually as an ecbolic or partus accelerator, bringing away the ovum precisely in the manner of *Acinula Clavus* or *Ergot*. Dr. Jefferson Church (of Springfield, Mass.) informed me, in 1830, that he had known the infusion of this article to be used as an ecbolic, or partus accelerator, in one case of lingering, but otherwise regular parturition—a case in which there was no deficiency of relaxation and preparation. Its operation was apparently precisely similar to that of *Acinula Clavus*. Indeed, in this case, the medicine was administered by the female attendants, before the arrival of Dr. Church, and the fact was not communicated to him till he observed that the patient was apparently under the influence of some agent of this character, and till he inquired whether the *Clavus* had not been employed. Dr. Charles Volney Dyer (of the village of Newark, in the town of Arcadia, and county of Wayne, N. Y.), whose attention I had particularly turned to the observation of this power of *Actæa racemosa*, informed me, in October,

1831, that he had used this article as an ecbolic, or partus accelerator, in six cases, with the most decided and satisfactory success. He also informed me that several of his professional neighbors had also used it in the same manner, and with precisely similar results. Dr. Dyer, and the other gentlemen mentioned by him, found a single dose of a fluidrachm of the saturated alcoholic tincture sufficient to produce all the desired effect, in all the cases in which they had employed it—in no instance having occasion to repeat the medicine. Professor A. March (of the Vermont Academy of Medicine) has used this article as an ecbolic, or partus accelerator, and he is much pleased with its operation. He very justly thinks that it differs somewhat in its manner of operation, from the *Acinula Clavus*. He says that a given degree of ecbolic effect from this article, is considerably more lasting than the same degree from the *Acinula Clavus*; and that when its ecbolic operation has ceased, there is less torpor, and greater susceptibility and capacity for action in the uterus, than before its employment, which is directly contrary to the operation of the *Clavus*. Dr. March, and all others, who, within my knowledge, have employed this article as an ecbolic or partus accelerator, agree that, as far as accurate observations have been made, it does not appear to exert that stupifying and deleterious influence upon the fœtus, that is produced by the *Acinula Clavus*.*

Although *Actæa racemosa* may be a more powerful narcotic than the *Clavus*, yet it is a narcotic, in some respects, of a very different character. It has much less tendency to produce somnolency, and scarcely any to induce actual coma. In this respect, as in some others, it has more affinity with *Strychnos Nux Vomica*, and the other articles belonging to the same group of narcotics, than it has to *Hyoscyamus*, *Datura*, *Belladonna*, &c. In my opinion, it is to this circumstance that we are to ascribe its less liability to destroy the fœtus, than the *Clavus*. Dr. Arza Andrews informs me, that he has witnessed very decided effects from this article, in the speedy production of firm uterine contraction after the delivery of the child, in cases where it was habitually deficient, by which the placenta has been expelled without hemorrhage, and all lochial discharge subsequently prevented; and this in a subject of very lax fibre, who, under such circumstances, usually suffered much from hemorrhage, not only during parturition, but also subsequent to delivery. Dr. C. V. Dyer tells me that he has found this article highly useful in uterine hæ-

* I am well aware that the death, the asphyxia, the languor, the feebleness, and the imperfect respiration, from too early a use of the *Clavus*, are commonly and confidently attributed to the long-continued and unremitting pressure of the head, caused by the incessant action of the uterus, while under the influence of this agent; but, in my opinion, without any just foundation. I have repeatedly attended upon females in their first parturition, where the pelvis was small and the head of the child large—where the parturient efforts continued almost without interruption for several days—and where the head of the child was compressed in a much greater degree, for a much longer time, and much more incessantly, than I have ever known in any case, where the *Clavus* was employed; and yet, the child breathed perfectly, and cried violently, immediately on its birth. I now very distinctly recollect the case of a lady, who, on account of the small size of the pelvis and the large size of the head of the fœtus, labored under the most violent parturient efforts for five days—during the last three of which, the head was very firmly and very steadily wedged in the pelvis, so as to produce the greatest compression and elongation that I ever witnessed; and yet the child breathed and cried actively, immediately after delivery. To the mother, the consequences of such a parturition were very serious; but, to all appearance, the child was in no respect injured. Reasons, which it is neither necessary nor proper to mention in this place, wholly prevented the mechanical assistance which this patient ought to have had. The narcotic powers of *Acinula Clavus* are certainly decided and prominent, when it is used in such manner as that they may be manifested. I have now been several years in the habit of using it with advantage, in various diseases, where it is beneficial entirely by this operation.

morrrhage generally, whether connected or not with a parturient or puerperal state. For uterine hemorrhage he gives from four to eight moderate doses of it daily; though, upon a pressing emergency, he begins with a single large dose.

I have quoted these several gentlemen, in relation to the operation of *Actæa racemosa*, because their testimonials are all worthy of the highest confidence, and because I would not have the facts rest upon my testimony alone. It is proper to add that their statements, and my own observations, concur perfectly. How frequently this article may fail of producing ecbolic effects, and under what circumstances such failure is liable to occur, I am unable to specify, since I have never happened to know of such an instance. If the root and its preparation are of the best quality, a fluidrachm of the saturated alcoholic tincture is often a sufficient dose. Where the root and the preparation are of an inferior quality, I have known half a fluidounce necessary. However, I have not unfrequently known specimens and preparations sold, which were nearly inert; and, of course, these must be expected to fail altogether. That in certain cases, and under certain circumstances, where the medicine is good, it may fail altogether, is quite likely, since nothing is infallible in this world; but I am at present unable to specify these cases and these circumstances.

The ecbolic powers of *Actæa racemosa*, as well as of *Acinula Clavus*, will probably be considered by many as perfectly peculiar, specific, and distinct powers—powers not identical with any other which have ever been made the foundation of classification in the materia medica; but from especial attention, for a long period, to the effects of the narcotics, I am strongly inclined to consider ecbolic and narcotic powers as in fact the same. All narcotics appear to have the power of producing convulsive action of some sort or other—either of the common sort, or of the tetanic, or of the epileptic. When a sufficiently large dose is given at once, some produce it as a primary part of their operation. Others produce it only when the system is under the influence of very large quantities, and, of course, merely as a secondary part of their operation. Some affect only the voluntary muscles in this manner; others produce it only in the involuntary muscles; while others still produce it both in the voluntary and in the involuntary muscles. Now, in single full and large doses, *Actæa racemosa* produces convulsive action of the common sort only—and this as a primary part of its operation—and in the involuntary muscles merely, and in the uterus previous to any other involuntary muscle. When given in an excessive and inordinate quantity, I have more than once known the *Actæa racemosa*, as well as the *Acinula Clavus*, to affect other involuntary muscles also. I have repeatedly seen interrupted and irregular action of the heart, and likewise affections of the respiratory muscles, much resembling those which occur in tetanus. I am therefore very strongly inclined to the belief, that various other narcotics will yet be found to possess ecbolic powers.

(To be continued.)

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, APRIL 10, 1833.

LIFE AND PORTRAIT OF DR. SPURZHEIM.

NOTICE BY MONS. RICHARD OF THE LIFE AND LABORS OF DR. SPURZHEIM—A
PORTRAIT BY HIS SON IN LAW.

Soon after the decease of Dr. Spurzheim, we forwarded to his relatives, through a mercantile friend in Paris, those numbers of this Journal that contained an account of his death, and the consequent proceedings of his friends. The receipt of these communications has been acknowledged ; and we present below an extract from our friend's letter, as it contains some information which it may be useful for those to have, who possess anything that can illustrate the character or objects of Dr. S., or that can throw any light on the history of his short but eminent career whilst in this country.

' Paris, February 6th, 1833.

' MY DEAR SIR,—I received your interesting letter of the 17th of November in due course ; and as soon as I could ascertain the address of one of Dr. Spurzheim's connections in Paris, lost no time in transmitting the papers you sent, together with the intelligence conveyed in your letter, relating to the same subject. This intelligence has proved extremely acceptable to the friends of the late Dr. S., as appears by the enclosed note from Mr. Richard, which I send, that you may notice his intention to publish an account of the life and scientific labors of the distinguished individual, whose bereavement to society at large is so keenly felt.

' Should it be in your power to contribute any further details respecting Mr. Spurzheim, from your own knowledge, or gathered from his friends and admirers in Boston, I offer myself as the organ of communication with his relations, who are mostly in Switzerland. Men possessed of such moral worth, and such examples of benevolence and charity, united to extraordinary powers of mind, are too rare in the world—and their removal is indeed a cause for general mourning. How poignant, then, must be the grief of those who, in addition to the common tie which links together society, are bound by the sacred one of kindred !

' The respect shown to the memory of this great and good man, reflects much honor upon the citizens of Boston, and affords an additional proof of the satisfactory state of morals and intellectual cultivation, which, as a Bostonian, I am proud to feel is diffused so widely among the inhabitants of my native place.

' Believe me, dear Sir,

Yours, very faithfully.

The name and address of the writer of the above are left at the office of this Journal, at the disposal of any one who is desirous of availing of his polite offer. We here append the note of M. Richard, which is referred to above.

' MONSIEUR,—J'ai reçu les journaux Américains que vous avez bien

voulu m'adresser, et je m'empresserai de les communiquer aux parens et amis du Dr. Spurzheim. Déjà plusieurs d'entr'eux à qui j'en ai fait part en ont été fort touchés, et se joignent à moi pour vous remercier, vous et M. le Dr. Robbins, de votre attention délicate. Dans toute la vivacité de nos regrets et de notre douleur, il y a du moins pour nous une consolation à penser que l'homme excellent, le savant illustre, dont nous déplorons la perte, a été apprécié aux Etats Unis selon son mérite—qu'il y a trouvé des sympathies et des amis, et que ses derniers momens ont été entourés des soins les plus tendres et les plus dévoués.

Ce qui caractérisait éminemment M. Spurzheim c'était son côté moral, sa bienveillance, et son humanité. Il étudiait la science de l'homme avec amour, parce qu'il la croyait éminemment utile à notre amélioration et à notre bonheur. Il s'était promis bien des hautes jouissances en partant pour l'Amérique, et il se proposait pour l'avenir bien des travaux intéressans. Pourquoi la mort a-t-elle brisé les unes et les autres ?

L'intérêt qu'il a inspiré, l'estime qu'on lui a portée, et les honneurs qui ont été rendus à sa mémoire par les habitans de Boston, font à la fois l'éloge de vos concitoyens et celui du Dr. Spurzheim.

Agreez, Monsieur, l'assurance de ma considération distinguée.
Paris, 24 Janvier, 1833. Rue du Regard, 6. J. DAVID RICHARD.

P. S.—Si quelques nouveaux détails, quelque publication nouvelle concernant Dr. Spurzheim, vous parvenaient d'Amérique, vous obligerez infiniment des parens et amis en les leur faisant connaître. Déjà M. — a eu la bonté de se charger de nous procurer quelques examplars d'un portrait lithographié du Docteur, annoncé par un des journaux que vous avez eu l'obligeance de m'envoyer. Je me propose d'écrire sur la vie et les travaux de M. Spurzheim, une notice aussi complète qu'il me sera possible ; et M. St. Bruyères, son beau-fils, a l'intention de peindre un grand portrait du Docteur. L'un et l'autre avons besoin de rappeler tous nos souvenirs, et de nous entourer de tous les lumières.

INTRODUCTION OF CHOLERA INTO CANADA.

A CORRESPONDENT at Montreal dissents from the opinion expressed in our recent communication from Dr. Payne, respecting the introduction of the cholera into Canada, although we cannot perceive that the results of our two friends differ very materially. He will excuse us, in our present confined space, for presenting only extracts from his letter, to which he has affixed the name of 'Contagio.'

'The correspondent of Dr. Payne asserts that, "Although the first case was that of an emigrant, yet the circumstance of its rapid spread, and that chiefly among French Canadians, is quite sufficient to repudiate the idea of its importation." Now the facts are these. The first case was, as above stated, in the person of an emigrant who arrived here on Saturday evening, the 7th of June. This patient died the same night, and his body was thrown out upon the beach, and exposed the greater part of the next day to the rays of the sun, and continually surrounded by a crowd of persons from the suburbs and every part of the town, who were passing immediately from this focus of infection to their respective places of abode. Thus the rapid spread of the disease may be accounted for, without destruction to the views of those who believe the disease contagious.

'I should not have troubled you with this paper, but many, to build up

their own favorite theories on this subject, are continually harping upon the "rapid and simultaneous" development of the disease, although the learned gentleman himself admits "a large proportion at the commencement were mere fear;" and I would only further remark that many of our physicians have labored with an untiring zeal to make it appear that the disease "might have been generated in this country." But why all this effort and labor?—let us look candidly at facts. We know we had no cholera till vessels arrived from infected ports, with the disease on board; and we know the first case in Montreal was an emigrant, and from that the progress was rapid, taking here, as it always has on the other continent, the main channels and routs of communication and transport. But as the disease declined, it was noticed by many that almost every case might be traced to some specific exposure; and several of our most learned physicians, who were stern anti-contagionists at the commencement, were induced by the facts which every day's experience developed, to change their position entirely.

'I have thus stated a few facts, which I know to be true, and to which I can testify. CONTAGIO.'

DEATH FROM A SINGLE LEECH-BITE.

A PARIS JOURNAL contains the relation of a singular instance of fatality from hemorrhage from a leech-bite. The patient was a stout country lad, to the pit of whose stomach a dozen leeches were applied for colic. When they had dropt off, some burnt rag was put on the part and the patient left alone 'the remainder of the day. On being visited at the end of that period, his bed was found full of blood,' and the bleeding went on in spite of many and varied measures for its arrest, until the lad died exanguious, at La Charité, whither he was carried for surgical aid. After death, there was nothing remarkable discovered on dissection.

The blood is stated to have been arterial, and to have proceeded from a single bite. The nitrate of silver was tried in vain, and the actual cautery was had recourse to, but too late.

New Substance discovered in Opium.—M. Peletier has announced the discovery of a new substance in opium, which, from its being found crystallized along with morphine, he calls *paramorphine*. It differs, however, essentially from morphine in its chemical properties; nor is it to be confounded with the codeine of Robiquet, or any other crystalline substance found in opium. Its taste is that of pellitory; its solubility in alcohol and ether greatly exceeds that of narcotine, from which it differs also in its fusibility and its crystallization. It acts powerfully on the animal economy, and in a very small dose speedily kills a dog, as M. Magendie has proved.—*Lon. Med. Gaz.*

Cure for Hydrophobia.—We notice, by the English medicals, that Sir Anthony Carlisle has given notice that he has received from South America several bottles of a liquid which is reputed to be a cure for hydrophobia. (Reputed!)

The Cholera at Havana, we are happy to learn, is on the decline; but the same conveyance brings intelligence of its irruption into Matanzas.

English Calomel.—M. Dupuytren lays much stress on the importance of English calomel, as prepared at the Apothecaries' Hall in London. It is much superior to the ordinary calomel which is made by sublimation, for it contains no free acid; and from its being made by the vapor of water, is in a much more perfect state of division.—*West. Med. Gaz.*

Diabetes Insiptidus.—A very singular case of diabetes insipidus came under my observation a few years ago, in a lady, about 30 years old, of a full habit and decided lymphatic temperament. She was suckling her second child—a robust and healthy infant, about four months old—when I was called to see her. Her breasts were very large, and the secretion of milk was at times quite copious. She informed me that her urinary discharges were periodically excessively profuse; and although it did not appear to affect her health, yet as there was scarcely any milk secreted, whilst the kidneys continued their inordinate action, the disorder interfered very much with the regular nourishment of her infant, and she desired, therefore, to have it removed.—I found, on inquiring more particularly into the circumstances of the case, that every five or six days she began to discharge excessive quantities of a pale and crude urine, amounting usually to four or five quarts in twenty-four hours. The urine had had but very little of the ordinary urinous or saline taste. This diabetic affection continued generally about four days, during which time there was but very little milk secreted, and the breasts remained empty and flaccid. Immediately on the cessation of the inordinate secretion of urine, the breasts became turgid, and the milk continued to be secreted very abundantly, until the kidneys resumed their excessive activity. These alternations of excessive secretory action between the breasts and the kidney, went on for upwards of three months; and at last ceased under the use of alterative doses of blue mass, and about twenty grains of magnesia, taken four times daily. The patient informed me, that precisely the same singular irregularity in these secretions, occurred during the last four months of suckling her first child. She became extremely nervous and dyspeptic, and was obliged to wean the infant.

Ibid.—Dr. J. ESERLE.

Process for obtaining certain Protoxydes.—M. Wehler asserts that the protoxydes of copper, iron and manganese, may be prepared with facility by melting the chlorides of these metals, with dry carbonate of soda. A spirit lamp gives ample heat for effecting this object.

Journal de Chimie Medicale.

We shall be happy to receive the paper of Dr. S. on the New London epidemic. The reader is requested to correct, with a pen, the following typographical error on page 117 of Vol. VII. '*Bignonia sempervirens* by Walter,' should read—*Bignonia sempervirens* by Linnaeus; *Anonymus sempervirens* by Waller, &c.

Whole number of deaths in Boston for the week ending April 6, 31. Males, 13—Females, 18. Of dropsy, 1—infantile, 2—brain fever, 1—dys, 2—throat distemper, 2—consumption, 5—suicide, 1—dropsy on the brain, 4—inflammation of the lungs, 1—lung fever, 1—mortification, 1—old age, 3—abscess, 1—child-bed, 1—burn, 1—inflammation of the bowels, 1—scarlet fever, 1.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

IS PRINTED AND PUBLISHED EVERY WEDNESDAY, BY CLAPP AND HULL,

At 184 Washington Street, corner of Franklin Street, to whom all communications must be addressed, *Post-paid.* It is also published in Monthly Parts, on the 1st of each month, each Part containing the numbers of the preceding month, stitched in a cover.—Price \$3.00 per annum in advance, \$3.50 if not paid within six months, and \$4.00 if not paid within the year.—*Postage the same as for a newspaper.*